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1. A method for communication of data between a transmitter and a receiver over one or more communication channels, the data being provided in a frame, the method comprising the steps of:
- at the transmitter:
- (a) dividing the frame into segments according to an optimum segment size;
 - (b) combining multiple segments into a segment block;
 - (c) applying a forward error correction encoding process to the segment block to produce a forward error correction block;
 - (d) sending the forward error correction block over a communication channel;
- at the receiver:
- (e) applying a forward error correction decoding process on the forward error correction block to produce a received block;
 - (f) dividing the received block into segments;
 - (g) determining if any segment was received in error; and
 - (h) requesting retransmission only of the segment received in error.
2. A method as in claim 1 additionally comprising the step of, at the transmitter:

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by counting the number of selective reject orders made to the transmitter.

8. A method as in claim 1 wherein step (k) determines an optimum number of frames according to a ratio of a number of segments received in error to a number of segments received correctly.

9. A method as in claim 1 wherein step (k) additionally comprises the step of determining an adjusted number of data bytes in a frame, X , from the formula:

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$$X = -H + \sqrt{(X_{\text{current}} + H_{\text{current}}) * H / R}$$

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where X_{current} is the present number of data bytes in a frame, H_{current} is the present frame overhead in bytes,, H is the new overhead for the frame in bytes, and R is a ratio of segments received in error to segments received correctly.

10. A method for providing wireless communication of digital signals, the digital signals being communicated between a plurality of wireless subscriber units and a base station, the digital signals being communicated using at least one radio frequency channel via Code Division Multiple Access (CDMA) modulated radio signals, the digital signals also having a given nominal data rate, the method comprising the steps of:

- 5 (a) making available a plurality of sub-channels within each CDMA radio channel, wherein a data rate of each sub-channel is less than the nominal data rate of the digital signals;
- (b) establishing a network layer session between terminal equipment connected to the subscriber unit through the base station to other terminal equipment connected to the base station; and
- 10 (c) during the network layer session, allocating available sub-channels on an as-needed basis, with the number of sub-channels allocated thereby changing during the duration of a given session;
- (d) dividing a network layer frame into segments according to optimum segment sizes;
- 15 (e) combining multiple segments into a segment block;
- (f) applying a forward error correction encoding process to the segment block to produce a forward error correction block;
- 20 (g) at a receiver, decoding the forward error correction block and divides it back into segments; and
- (h) requesting retransmission only of a segment received in error.

11. A method as in claim 10 additionally comprising the step of:
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- (i) determining an optimum segment size for the sub-channels based upon a determined number of segments received in error which were attempted to be communicated over the sub-channels.

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12. A method as in claim 10 wherein step (i) additionally
comprises dynamically adjusting the frame size of a
channel to optimize the effective throughput of the
overall system based upon the ratio of actual data
5 transferred to the number of bits actually used to
carry information, including frame overhead and
retransmissions.

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